PIZZA Hut ®

FOSTER
REFRIGERATOR

Service Manual

FADPR2
Foster, Automatic, Defrost,
Prove, Retard
2 Trolley

ISO 14001   ISO 9001   CE

<h1>Environmental Management Policy for Service Manuals and Duets.</h1>

Product Support and Installation Contractors

Foster Refrigerator recognises that its activities, products and services can have an adverse impact upon the environment.
The organisation is committed to implementing systems and controls to manage, reduce and eliminate its adverse environmental impacts wherever possible, and has formulated an Environmental Policy outlining our core aims. A copy of the Environmental Policy is available to all contractors and suppliers upon request.

The organisation is committed to working with suppliers and contractors where their activities have the potential to impact upon the environment. To achieve the aims stated in the Environmental Policy we require that all suppliers and contractors operate in compliance with the law and are committed to best practice in environmental management.

Product Support and Installation contractors are required to:

1. Ensure that wherever possible waste is removed from the client's site, where arrangements are in place all waste should be returned to Foster Refrigerator's premises. In certain circumstances waste may be disposed of on the clients site; if permission is given, if the client has arrangements in place for the type of waste.

2. If arranging for the disposal of your waste, handle, store and dispose of it in such a way as to prevent its escape into the environment, harm to human health, and to ensure the compliance with the environmental law. Guidance is available from the Environment Agency on how to comply with the waste management 'duty of care'.

3. The following waste must be stored of separately from other wastes, as they are hazardous to the environment: refrigerants, polyurethane foam, oils.

4. When arranging for disposal of waste, ensure a waste transfer note or consignment note is completed as appropriate. Ensure that all waste is correctly described on the waste note and include the appropriate six-digit code from the European Waste Catalogue. Your waste contractor or Foster can provide further information if necessary.

5. Ensure that all waste is removed by a registered waste carrier, a carrier in possession of a waste management licence, or a carrier holding an appropriate exemption. Ensure the person receiving the waste at its ultimate destination is in receipt of a waste management licence or valid exemption.

6. Handle and store refrigerants in such a way as to prevent their emission to atmosphere, and ensure they are disposed of safely and in accordance with environmental law.

7. Make arrangements to ensure all staff who handle refrigerants do so at a level of competence consistent with the City Guilds 2078 Handling Refrigerants qualification or equivalent qualification.

8. Ensure all liquid substances are securely stored to prevent leaks and spill, and are **not** disposed of to storm drains, foul drain, surface water to soil.

DISPOSAL REQUIREMENTS

If not disposed of properly all refrigerators have components that can be harmful to the environment. All old refrigerators must be disposed of by appropriately registered and licensed waste contractors, and in accordance with national laws and regulations.

The materials used to package this refrigerator/coldroom may be recycled. Recycling will reduce the effect this waste has upon the environment. For information on waste collection facilities in your area, and other advice on recycling of packaging waste, visit www.recycle-more.co.uk

SECTION 1

INTRODUCTION

PIZZA HUT –THAW/PROVE/RETARD CABINET

The pizza processing is provided in three formats:

Fully automatic process facility incorporating all three functions.
Manual Thaw/store facility.
Manual Prove/ Retard process facility.

The cabinet is designed to accommodate two special pizza trolleys.

The control system for each function displays time and temperature allowing the operator to determine the status of the process.

SECTION 2

CABINET SPECIFICATION

2.0 MODELS

2.1 Pizza Hut Modular Cabinet FADPR2.
Nomenclature based on - F = Foster. A = Automatic. D = Defrost. P = Prove R = Retard. 2 = " trolleys.

2.2 Construction.
The product is of modular construction with the refrigeration system built onto an independent ceiling panel.
The door is a slab type with self-closing rising butt hinges. Complete with a full height handle and no locks.
Magnetic door gasket and a wiper gasket to the bottom edge of the door.
The door can be hinged left or right hand as required.

2.3 Internal Fittings
Two Trolleys per section. (Not supplied as standard)
Maximum size of trolley 430 x 760 x 1730mm.
The internal walls are protected with aluminium Bumper Bars.

2.4 Service Requirements.
Electrical Supply 230V, 1 phase, 50Hz.
Fuse rating 13 Amp.

2.5 Temperature Ranges.
The cabinet is designed to automatically process Pizza Dough from a frozen condition (-18°c / -21°c) to a finished product as below.

Thaw/ Retard Temperature.	+2°c/ +4°c.
Prove Temperature.	+2°c/ +4°c to +28°c/ +32°c.
Retard Temperature.	+28°c/ +32°c to +2°c/ +4°c.

The cabinets conform to ISO Climate Class 5 (40°c ambient with 40% RH).

2.6 Control Function.
The machine uses the Foster Surf Navigation control system.
The controls are located in a control console mounted above the door.

Standard Finish.

Exterior walls.	Co-Laminate.
Rear Wall	Co-Laminate.
Front Wall.	Co-Laminate
Ceiling.	Co-Laminate
Door.	Stainless Steel 304.
Interior Walls & Ceiling.	Smooth Aluminium.

Insulation thickness CFC Free polyurethane foam.

Sides.	75mm
Back	75mm
Front	75mm
Ceiling	100mm
Door	50mm
Base	Floorless

The clock will automatically take into account daylight saving time by advancing one hour at 02:00 on the last Sunday in March and decrease by one hour at 02:00 on the last Sunday in October. Additionally the date will automatically update each leap year to allow for the 29th of February. Time and date settings will be retained in the controller memory for up to 50 days in the event of power failure, when the power is reinstated the time and date will be updated automatically.

2.7 Air Flow.
Air is circulated through the evaporator coil and discharged through a vented air duct fitted to the rear wall of the cabinet.
With the 'Fan Hold Operation' set to auto the evaporator fans, during the hold/ storage modes, will cycle with the condensing system and will also run for one minute during the off cycle period to stir the air and then switch off again.
Internal airflow is generated by 3 x 10W motors with 200mm Ø, 34° pitch angle blades.

2.8 Retarding (Refrigeration).
The refrigeration system is a self-contained unit comprising of air-cooled condensing unit, forced air evaporator and all ancillary parts and controls. The equipment is pre-charged with refrigerant and pre-wired to allow for easy installation on site.

Refrigerant used is R134a.
The evaporator has a large surface area to provide high humidity during the retard operation.
Refrigerant control is a capillary based system used to control the correct amount of refrigerant required to meet the demand of the evaporator.

2.9 Proving (Heating).

An electric heater assembly is mounted on the rear face of the cooling coil which is energised during the prove process.
As an extra safety feature, a pre-set overheat thermostat switch is provided should the main control thermostat fail.
During the Thaw process both cooling and heating are used to ensure that the air temperature is controlled to defrost the dough.

3.3 Panel Layout and Dimensions

1206

965
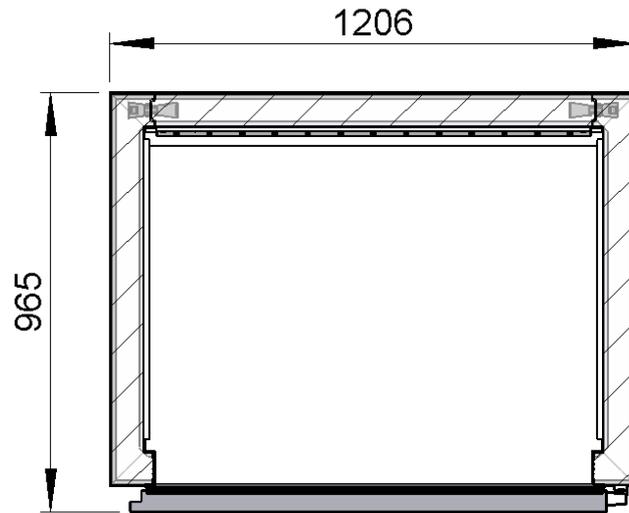
3.4 Ceiling panel with the refrigeration system / heater assembly

3.5 Cabinet Dimensions

1200

342

34

1800

30

2206

965

2206

3
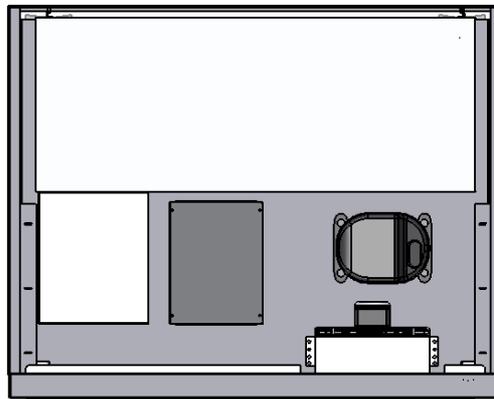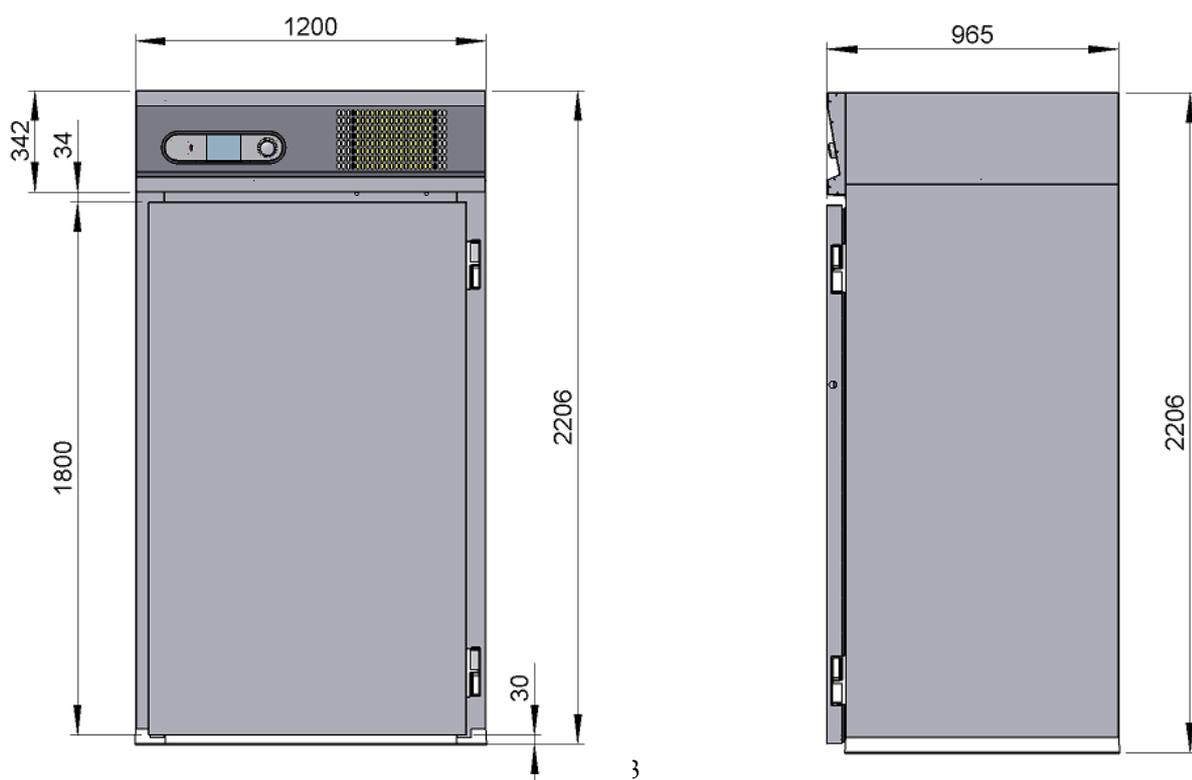
3.6

'U' Channel Fitting
The 'U' channel is supplied cut to the correct lengths, use the cardboard template provided to position the channel on the floor.
The external dimensions of the room are - 1200mm Wide X - 965mm Deep
It is important that the 'U' channel is fixed squarely so that the panels will lock together when inserted.

It is recommended that there should be no more than 3mm tolerance in the floor level as this can affect the correct location of the locking panels.
Using a spirit level check floor level on all four sides.
If required use packing shims to take up any anomalies in the floor.
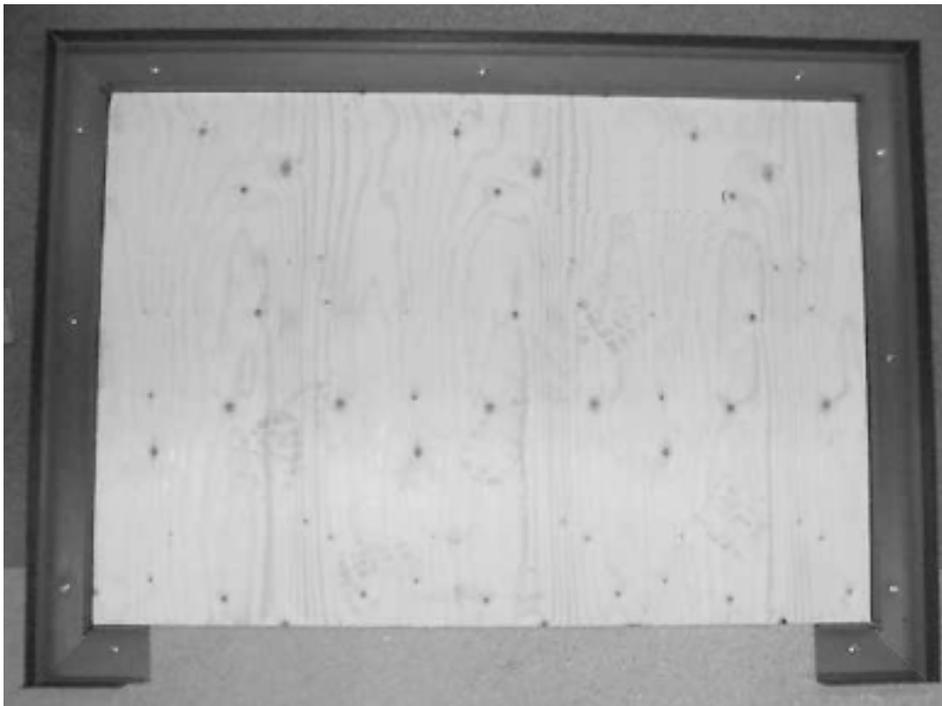
Once you are satisfied with the level the U channel can be rawl-plugged or hilti-nailed into position ensuring it is sealed with silicone sealer between the floor and the channel to prevent moisture penetration.
Apply 'mastic sealer' to the inside of the channel so that when the panels are located there is a vapour seal.
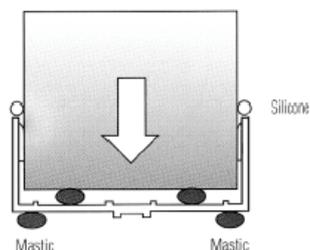
3.7 ASSEMBLY OF WALL PANELS.
Note: there is no door header panel as this is integral with the ceiling panel.
Fit the side panel into the channel and apply a bead of mastic to the rear edge to create a vapour seal rear (see fig 1). Place the rear panel in the channel, these can now be locked together by means of the Foster Lock (see fig 2) operated by the hexagon shaped key provided (see fig 3). All panels are locked internally.

Fig 1   Fig 2   Fig 3
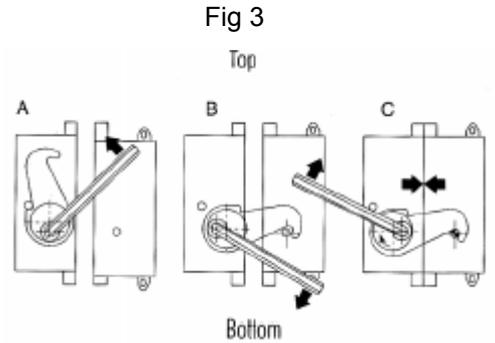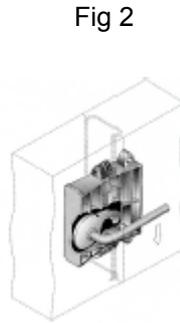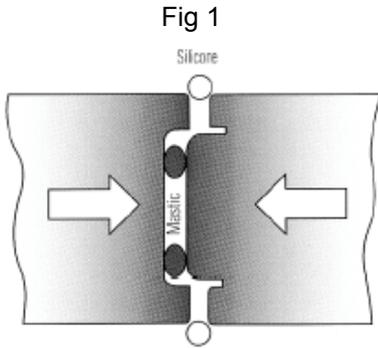
3.8 FITTING THE CEILING PANEL.
At the top of the wall panels there is a recess that accepts the ceiling.
Apply mastic to the recess so that when the panel is fitted there is a good vapour seal.

Slacken the screws securing the front panel to the sides and lift away, taking care not to damage the interconnecting cables, rest it securely on the top of the ceiling panel. See below.
Lift the ceiling panel complete and lower into the top recess.
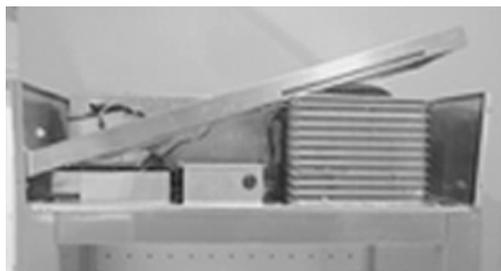
With the ceiling panel in place slide the galvanised angle bracket into place (see fig 4). Secure in place using the screws provided (see fig 5 and 6).

Fig 4	Fig 5	Fig 6

With the ceiling panel secured in place seal the internal joints with silicone sealer.
Insert the buttons into the lock holes.

3.9 FITTING THE REAR AIR DUCT
1) Prior to fitting the rear air duct check that the **Air Return Duct (A)** is correctly located into the **Coil Driptray Flange (B)**, see fig 7.
2) Place the air duct against the rear of the cabinet and insert into the space between the air return duct and the rear of the cabinet to a depth of 10mm, see fig 7, secure in place using the self tapping screws provided.

Fig 7

Coil driptray flange (B)

Air Return Duct (A)

Insert airduct 10mm into aperture

Air Duct

Rear of Cabinet
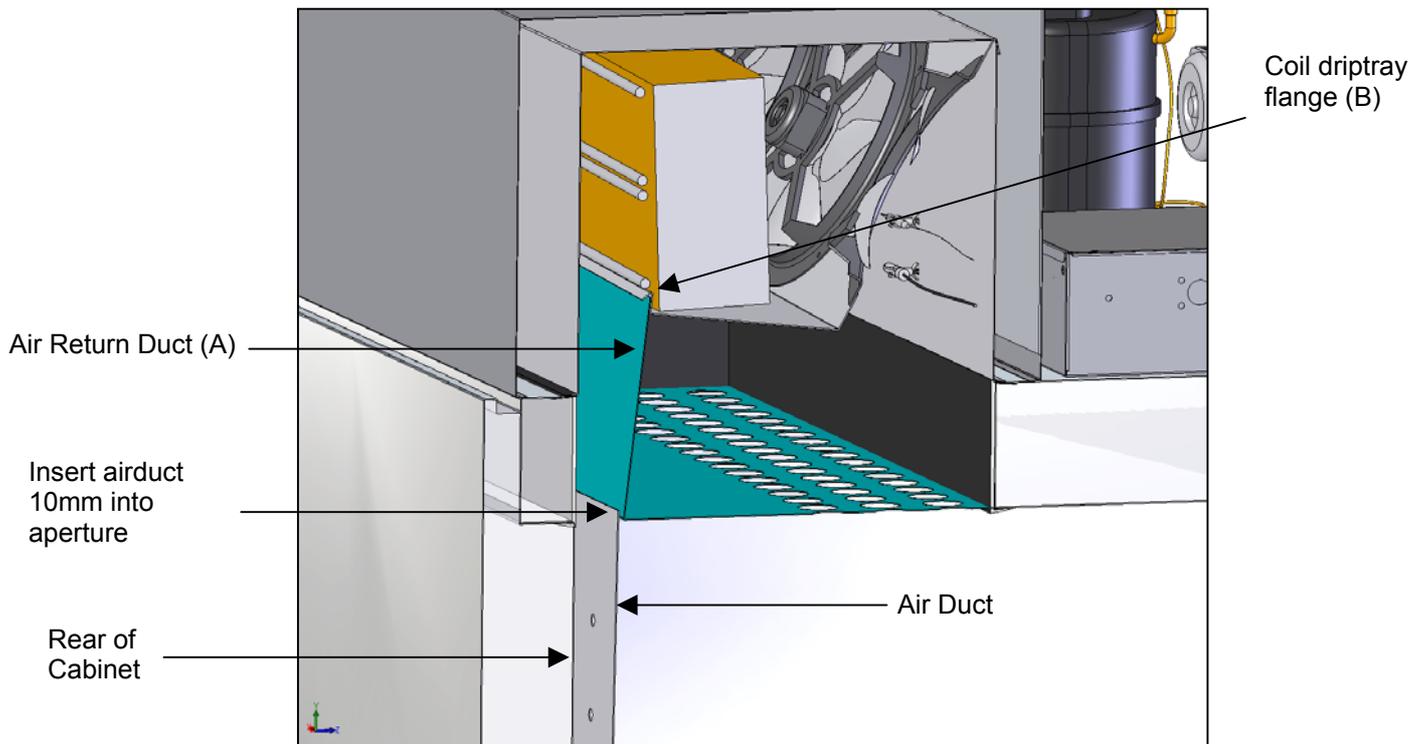
3.10 FITTING THE BUMPER BARS
Place the rear bumper bars against air duct and line up with the pre-drilled threaded holes in the duct, secure in place using the M5 screws provided.
Place the side bumper bars against side panels lining them up with the pre-drilled holes, secure in place using the self tapping screws provided.

3.10 FITTING THE DOOR

Check that the inserts are fitted correctly into the hinge parts attached to the cabinet (see fig 8).
Check that the insert for the door part of the hinges are correct for the door hinging, fig 9 shows the insert fitted for right hand hinging.

Fig 8

Fig 9

Fig 10

Hold the door at a 90° angle to the cabinet and lower the door on to the hinges, see fig 10 for the correct hinge alignment in the closed position. Check that it hangs squarely to the cabinet.
Re-fit the unit cover and check that the top of the door lines up with the bottom of it.
To remove the door reverse the process.
After hanging the door inspect the door gasket ensuring that seals fully to the doorframe.
Also ensure that the door wiper gasket, fitted to the bottom of the door (see fig 11).

Fig 11
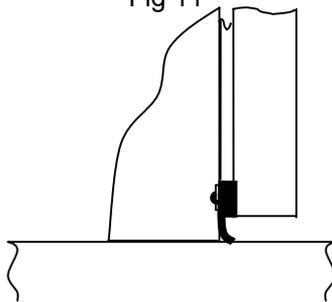
Section 4
Operating Instructions

To initiate the program just press and release the dial for the program to start

Standard Operation
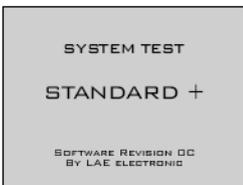
When mains electrical power is first applied to the controller it will carry out a self-test function, for approximately 3 seconds. During this period the display will show.

On completion of the self-test, the controller will revert to the last chill program that was run Storage, Manual Prove 1, Manual Prove 2, Manual Prove 3, ADPR 1.
The example shows the controller in Manual Prove 1 mode with the previous and next programs indicated at the top of the display. To change the programme rotate the dial, either clockwise or anticlockwise to select the type of program you require.

Set Time and Date

For the machine to be used in automatic mode it is necessary to set the time and date.
The time and date can only be set when the controller is not running a programme.
Select one of the programmes (except 'Storage'), for example 'MANUAL PROVE 1' below left, and press and hold the dial for 2 seconds, the programme information screen will be displayed, below middle. Rotate the dial until 'SET TIME/DATE' is highlighted. Press and release the dial to access the time service screen, below right. Press and release the dial to move to the displayed time in hours and minutes, rotate the dial to alter the time, once the correct time has been achieved press and release the dial to move to 'DATE'. To change the date, month, day and year settings use the same procedure as for setting the time.
On completion press and hold the dial for 2 seconds to return to the program selection screen.
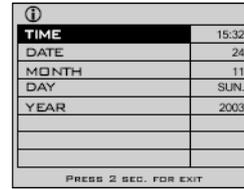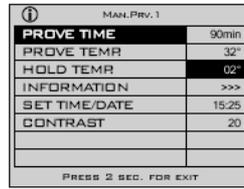
Programme Selection and Start Up

Manual Prove 1

Select the programme required, i.e. 'MANUAL PROVE 1', press and release the dial to start. The display will change to the screen below left with the flashing of 'MANUAL PROVE 1' for one minute. During this period the time setting can be adjusted to either increase or decrease the prove time in one minute increments, clockwise to increase or anti-clockwise to decrease. If no changes are required either press and release the dial or leave and after one minute the programme will start with the screen displaying below middle. This screen shows the time selected counting down and the status bar showing the operation mode. The controller will adjust the internal temperature accordingly.
During the programme by rotating the dial an additional information screen may be viewed, see below right.
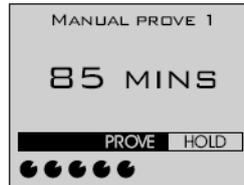
When the time reaches '0' the alarm will sound intermittently and the screen will change displaying '0', below right. The operator can check the product to determine if further proving time is required. If required rotate the dial to select the time and press to continue the process, this option can be repeated continually. If no time extension is selected or the dial is pressed while the displays show '0' the controller will automatically commence the retarding process with the turning on of the refrigeration system.

The screen will change to display the unit in 'RETARDING' mode, below left, with the temperature being displayed and 'HOLD' highlighted. The refrigeration system will lower the temperature until it reaches the storage setpoint when the screen will change to display 'STORAGE', below right. The controller will continue to operate within the storage temperature limits indefinitely initiating a time based defrost at pre-set intervals

Manual Prove 2 / Manual Prove 3

The same operation function is used for manual prove 2 and 3 except that the default proving times are different, see table below.

	Manual Prove 1	Manual Prove 2	Manual Prove 3
Prove Time	90 minutes	80 minutes	70 minutes

Storage
The storage programme is selected by rotating the dial until 'STORAGE' is displayed, below left.
To start the programme press and release the dial.
The screen will change, below middle left, to display the internal temperature of the cabinet.
Rotating the dial at any time will change the screen to display air temperature, evaporator temperature and the time that the programme has been running, below middle right.
To stop the programme press and hold the dial for 2 seconds, the screen will change to display program selection menu, below right.
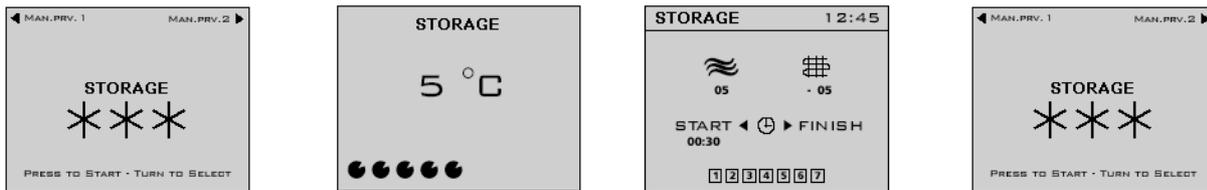
ADPR Automatic Defrost, Prove and Retard.

Rotate the dial to select the ADPR programme, see below left. When selected press and release the dial to start the programme. The screen will change to display prove time and end time, see below middle. The 'PROVE TIME' value can be changed by rotating the dial clockwise to increase and anticlockwise to decrease. When the required value is entered press and release the dial to set it. The 'END TIME will be highlighted to display the prove time that was last set, rotate the dial to adjust the time for the prove end time.
Note: Setting of the prove end time is only possible within the next 24 hour period, minus the prove time. It is not possible to use this function as an immediate prove cycle.
Once the time has been set press and release the dial to start the programme. The screen will change to display internal air temperature, end time and function, below right.
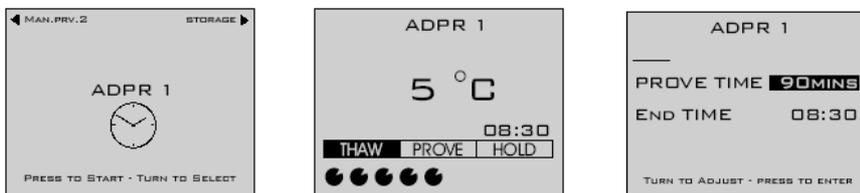
The controller will continue to control the temperature in the thaw mode until the time is reached for the prove cycle to start, below left. To achieve this the controller calculates back from the end time to determine the prove start time. Rotating the dial at any time will change the screen to display air temperature, evaporator temperature and the time that the programme has been running, below middle.
When the time reaches '0' the alarm will sound and the screen will change to display 'CYCLE COMPLETE EXTEND' screen, below right. The operator can check the product to determine if further proving time is required. If required rotate the dial to select the time and press to continue the process, this option can be repeated continually. If no time extension is selected or the dial is pressed while the displays show '0' the controller will automatically commence the retarding process with the turning on of the refrigeration system.

The screen will change to display the unit in 'RETARDING' mode, below left, with the temperature being displayed and 'HOLD' highlighted. The refrigeration system will lower the temperature until it reaches the storage setpoint when the screen will change to display 'STORAGE', below right. The controller will continue to operate within the storage temperature limits indefinitely initiating a time based defrost at pre-set intervals

9

Defrost

Defrost occurs automatically only in the storage/ hold mode with the screen below being displayed.
Note: It is not possible to initiate a manual defrost.
On completion of the defrost a one minute drain period will be initiated to allow for excess melt water to drain away.
On completion the unit will revert to normal operation.

If the controller is not running a program the display will 'switch off' after 20 minutes.
When this happens the screen will display the 'sleep bubble'.
Press or rotate the dial and the display will return to showing the previous operating program that was run.

Section 5
Alarms and Warnings

High Pressure Alarm

The high-pressure alarm will be displayed if the refrigeration system exceeds the safe operating pressure. It is not possible to start the any programme while this alarm situation exists.
Causes for this alarm could be:
Is the airflow restricted? Does the condenser filter require cleaning?
If the problem persists call your Foster Authorised Service Company.

Power Fail:

If the power fails for up to five minutes the unit will re-start on the resumption of the power supply without affecting the selected cycle. Longer than five minutes and the controller will enter the hold mode. To check the cycle operation look in the information screen to check the cycle time.
To re-start press and release the dial, the screen will return to the hold screen. Press and hold the dial for two seconds the display returns to the program selection.

Air Probe:

If this alarm occurs the programme will stop with the screen displayed left. The alarm will sound and can be cancelled by pressing and releasing the dial or it will stop after a set period but resound again after a pre-set time. The controller will automatically enter the storage phase until the cycle is stopped but it will not be possible to start further cycles until your Foster Authorised Service Company has rectified the fault.

Evaporator Probe:

If this alarm occurs the programme will continue with the screen displayed left. The alarm will sound and can be cancelled by pressing and releasing the dial or it will stop after a set period but resound again after a pre-set time. The controller will continue operating as normal until the cycle is stopped but it will not be possible to start further cycles until your Foster

SECTION 6
SERVICE SETTINGS

Service settings access

Whilst in the program selection screen press and hold the dial for 2 seconds, the information screen will be displayed continue pressing the dial for a further 2 seconds to display the 'SERVICE MENU'. LANGUAGE will be highlighted.

SERVICE	
LANGUAGE	ENG
DIAGNOSTICS	1-COMP
FOOTPRINT	
CODE	0
Press 2 seconds for Exit	

Changing Text Language.
With LANGUAGE highlighted, press and release the dial, 'ENG' (English) will be highlighted.
Note: English is the only language available for this controller.

Diagnostics
Rotate the dial until you reach 'Diagnostics', press and release the dial to highlight the component. In this program you can test each of the major components on the machine in sequence, 1- COMPRESSOR, 2-FAN1, 3-Not available, 4- DEFROST, 5- ALARM, ESC (escape). Rotate the dial until the relay output is highlighted, once selected press and the dial to test the relay, the relay will remain energised for as long as it is pressed. On completion of the test you must rotate the dial until you highlight 'ESC' press and release the dial to move to the next program.

Function Test
Rotate the dial until you reach 'FOOTPRINT', press and release the dial to initiate the controller function self test.
This allows for the engineer to test the operation of the machine without having to wait for a full program to run. This function should be carried out with the cabinet / room empty. Each of the relays will be energised to simulate the chill process. Relay 1-COMPRESSOR, Relay 2-FAN1, Relay 3-NOT USED, Relay 4-DEFROST, Relay 5-ALARM, will all be switched on and of automatically in a pre determined manner to simulate program operation (whether they are connected or not).
The test is based around an algorithm built into the software. Prior to starting the program it is advisable to place a probe, in the centre of the cabinet/room, attached to an independent measuring device to check the air temperature as the air, coil and food probes are not active during this program. The temperature achieved will depend on the model. The air temperature should be checked 5 to 6 minutes into the program. The temperature achieved should be the minimum temperature and can be checked against the model type found in the parameter table on page 11. (For further information go to page 21).
Once the test is completed the display reverts to the last chill program and not to the service parameters.

Settings and Parameters

Passcode.
Rotate the dial until you reach 'PASSCODE', below left, press and release the dial to highlight the code, below right.
Rotate the dial until you reach the code '131'. Once achieved press and release the dial to acknowledge.

SERVICE	
LANGUAGE	ENG
DIAGNOSTICS	1-COMP
FOOTPRINT	
CODE	0
Press 2 seconds for Exit	

SERVICE	
LANGUAGE	ENG
DIAGNOSTICS	1-COMP
FOOTPRINT	
CODE	131
Press 2 seconds for Exit	

Profiles.
You are now in the program profiles. The controller has 9 operating programs – STORAGE, MANUAL PROVE 1, MANUAL PROVE 2, MANUAL PROVE 3, AUTOMATIC DEFROST PROVE & RETARD 1 (ADPR 1), MANUALTHAW 1, MANUALTHAW 2, MANUALTHAW 3, AUTOMATIC THAW.
NOTE: the manual and automatic Thaw programmes are not used for this cabinet.

These programs are all available depending upon which of the profiles are selected, see below.

PROGRAMS	PROFILES					
	STANDARD	STANDARD +	EXPRESS	EXPRESS +	THAW	EXPERT
STORAGE	✗	✓	✗	✓	✗	✓
MANUAL PROVE 1	✓	✓	✓	✓	✗	✗
MANUAL PROVE 2	✓	✓	✓	✓	✗	✗
MANUAL PROVE 3	✓	✓	✓	✓	✗	✗
ADPR 1	✓	✓	✗	✗	✗	✗
MANUAL THAW 1	✗	✗	✗	✗	✓	✓
MANUAL THAW 2	✗	✗	✗	✗	✓	✓
MANUAL THAW 3	✗	✗	✗	✗	✓	✓
AUTOMATIC THAW	✗	✗	✗	✗	✗	✓

X = DISABLED   ✓ = ENABLED

To change the profile rotate the dial to select program, press and release the dial to accept the change. The 3 chevrons in the box opposite the selected program confirm the change.
The default operating profile is 'STANDARD+'.
The table identifies which programs are available from the profile selected.

SERVICE	
STANDARD	
STANDARD +	⟫
EXPRESS	
EXPRESS +	
THAW	
THAW +	
Press 2 seconds for Exit	

Parameter Access.
From the profile screen once the selection has been made press and release the dial to access the parameter list. The screen will display the parameters as shown in the screen below left. To access the system parameters rotate the dial anticlockwise see below right.

STANDARD +	
STORAGE	
MANUAL PROVE 1	
MANUAL PROVE 2	
MANUAL PROVE 3	
ADPR 1	
MANUAL THAW 1	
MANUAL THAW 2	
MANUAL THAW 3	
Press 2 seconds for Exit	

STANDARD +	
AUTOMATIC THAW	
SYSTEM	
Press 2 seconds for Exit	

Selection is made by pressing and releasing the dial.

The table below contains the complete parameter list and includes the selectable range and default values.
PARAMETERS

PARAMETER	DESCRIPTION	VALUE	MINIMUM	MAXIMUM	DEFAULT
STORAGE					
PO1	AIR TEMP	°C	2	2	2
MANUAL PROVE 1					
PO2	PROVE TIME	MINUTES	P03	P04	90
PO3	PROVE TIME MIN	MINUTES	5	90	75
PO4	PROVE TIME MAX	MINUTES	90	240	105
PO5	PROVE TEMP STD	°C	P06	P07	32
PO6	PROVE TEMP MIN	°C	5	25	32
PO7	PROVE TEMP MAX	°C	25	45	32
PO8	HOLD TEMP	°C	P09	P10	2
PO9	HOLD TEMP MIN	°C	-10	5	2
P10	HOLD TEMP MAX	°C	5	20	2
MANUAL PROVE 2					
P11	PROVE TIME	MINUTES	P12	P13	80
P12	PROVE TIME MIN	MINUTES	5	90	60
P13	PROVE TIME MAX	MINUTES	90	240	90
P14	PROVE TEMP STD	°C	P15	P16	32
P15	PROVE TEMP MIN	°C	5	25	32
P16	PROVE TEMP MAX	°C	25	45	32
P17	HOLD TEMP	°C	P18	P19	2
P18	HOLD TEMP MIN	°C	-10	5	2
P19	HOLD TEMP MAX	°C	5	20	2
MANUAL PROVE 3					
P20	PROVE TIME	MINUTES	P21	P22	70
P21	PROVE TIME MIN	MINUTES	5	90	60
P22	PROVE TIME MAX	MINUTES	90	240	90
P23	PROVE TEMP STD	°C	P24	P25	32
P24	PROVE TEMP MIN	°C	5	25	32
P25	PROVE TEMP MAX	°C	25	45	32
P26	HOLD TEMP	°C	P27	P28	2
P27	HOLD TEMP MIN	°C	-10	5	2
P28	HOLD TEMP MAX	°C	5	20	2
ADPR1					
P29	PROVE TIME	MINUTES	P30	P31	90
P30	PROVE TIME MIN	MINUTES	5	90	60
P31	PROVE TIME MAX	MINUTES	90	240	120
P32	PROVE TEMP STD	°C	P33	P34	32
P33	PROVE TEMP MIN	°C	5	25	32
P34	PROVE TEMP MAX	°C	25	45	32
P35	HOLD TEMP	°C	P36	P37	2
P36	HOLD TEMP MIN	°C	-10	5	2
P37	HOLD TEMP MAX	°C	5	20	2
MANUAL THAW 1					
P38	THAW TEMP	°C	0	45	8
P39	THAW TIME	MINUTES	P40	P41	360
P40	THAW TIME MIN	MINUTES	0	300	240
P41	THAW TEMP MAX	MINUTES	300	900	480
MANUAL THAW 2					
P42	THAW TEMP	°C	0	45	8
P43	THAW TIME	MINUTES	P44	P45	480
P44	THAW TIME MIN	MINUTES	0	300	240
P45	THAW TEMP MAX	MINUTES	300	900	600
MANUAL THAW 3					
P46	THAW TEMP	°C	0	45	8
P47	THAW TIME	MINUTES	P48	P49	600
P48	THAW TIME MIN	MINUTES	0	300	240
P49	THAW TEMP MAX	MINUTES	300	900	840
AUTOMATIC THAW					
P50	THAW TEMP	°C	0	45	8
P51	THAW TIME	MINUTES	0	80	10
P52	THAW TIME MIN	MINUTES	0	600	240
P53	THAW TEMP MAX	INTERGER	0	100	60
SYSTEM					
P54	PROVE EXTEND ALARM	MINUTES	0	30	1
P55	PROVE EXTEND TIME	MINUTES	P58	P59	0
P56	PROVE EXTEND TIME MIN	MINUTES	0	10	0
P57	PROVE EXTEND TIME MAX	MINUTES	10	60	30
P58	THAW – HOLD TEMP	°C	-25	45	2
P59	CHILL – HOLD HYSTERESIS	°K	2	20	4
P60	HEAT HYSTERESIS	°K	2	20	3
P61	SHORT CYCLE DELAY	MINUTES	0	30	2
P62	FAN 1 HOLD OPERATION	FUNCTION	CYCLE/ AUTO/ ON		AUTO

P63	DEFROST TYPE	FUNCTION	OFF/ ELEC/ GAS		OFF
P64	DEFROST PER DAY	INTEGER	0	24	2
P65	DEFROST END TIME	MINUTES	1	60	20
P66	DEFROST END TEMP	°C	0	50	20
P67	DRAIN TIME	MINUTES	0	30	1
P68	FAN DELAY TEMP	°C	-15	15	5
P69	DUTY CYCLE	%	0	100	6
P70	COMPRESSOR REST TIME	MINUTES	0	30	1
P71	DOOR SWITCH 2	FUNCTION	NO	YES	NO
P72	DOOR SWITCH 1	FUNCTION	NO	YES	NO
P73	DOOR STOP	MINUTES	0	30	1
P74	DOOR ALARM DELAY	MINUTES	0	30	5
P75	HIGH ALARM TEMP	°K	0	50	10
P76	HIGH ALARM DELAY	MINUTES	0	120	30
P77	ALARM TIME	SECONDS	0	120	20
P78	ALARM REPEAT INTERVAL	MINUTES	0	480	1
P79	ALARM BUZZER	FUNCTION	NO	YES	NO
P80	AUTO TIME ADJUST	FUNCTION	NO	YES	YES
P81	AIR PROBE OFFSET	°K	-15	15	0
P82	COIL PROBE OFFSET	°K	-15	15	0
P83	FOOD PROBE ENABLE	INTERGER	0	1	0
P84	FOOD PROBE OFFSET	°K	-15	15	0
P85	ADDRESS	INTERGER	1	255	1

Probes
Air and Evaporator Probes
The air and evaporator probes, type 2K NTC, are the same and are identified as T1 Air Probe and T2 Evaporator Probe. These are the thermistor type and are fully enclosed to make it completely waterproof and resilient to temperature variation within the limits of rapid cycling. The probe is capable of measuring temperature in excess of -30°C and 50°C with 1°K accuracy at 1°C and no more than 2°K at the upper and lower temperature ranges.

Probe temperature resistance values

°C	K ohm	°C	K ohm	°C	K ohm	°C	K ohm	°C	K ohm
-40	44.657	-5	7.198	30	1.651	65	0.497	100	0.189
-35	33.505	0	5.716	35	1.371	70	0.426	105	0.166
-30	25.388	5	4.571	40	1.143	75	0.367	110	0.142
-25	19.402	10	3.682	45	0.958	80	0.318	115	0.125
-20	14.961	15	2.987	50	0.807	85	0.276	120	0.111
-15	11.644	20	2.437	55	0.683	90	0.24	125	0.099
-10	8.133	25	2	60	0.582	95	0.21		

7 Technical Data

Model	Ref	Ref Charge	Volts	Phase	Hz	Power Absorbed Retard	Power Absorbed Prove	Run Amps Retard	Run Amps Prove
FADPR2	R134A	750 grms	230	1	50	823w	1970w	4.4	8.5

8.Spare Parts List

ITEM	DESCRIPTION	PART NUMBER
Compressor		00-555669
Condenser	LUVA 194	15431180
Condenser Fan		15470027
Condenser Filter	Polyfoam	01-232050-01
Drier R134A		15480908
Vaporiser Tray	With Heater	16020373
Vaporiser Heater	140W	15240023
Prove Heaters	915W	15843321
Evaporator	012674	00-554901
Evaporator Fan Motor	10W. 240 volt. (change fan blade to 31° Pitch part number 15871014)	00-599687
Fan Blade	200mm Diameter 34° Pitch	00-555808
Capillary 3M x 064	Available in 5m lengths	16010664
Relay	30amp 240v AC G7L1AT	15490420
Relay Clip	For Above	15490421
8 Pin Relay	10amp 8 pin Mk2ps 230v	15490414
8 Pin Relay Base	For Above	15490416
Controller Motherboard	PCB/Motherboard FST-FPH-MB1	01-254165-01
Controller Display PCB	Controller LCD Display FST-FPH-DU1	01-254166-01
Dial Encoder PCB		00-555396
Air Probe		00-555397
Evaporator Probe		00-555398
Safety Thermostat	65 / 150°c	00-599554
Circuit Breaker	10 Amp	15242488
Circuit Breaker	6 Amp	15242487
Door Gasket	930 x 1764mm Magnetic	01-252932-01
Hinge	Fermod 481	15230550
Wiper Gasket		16040015
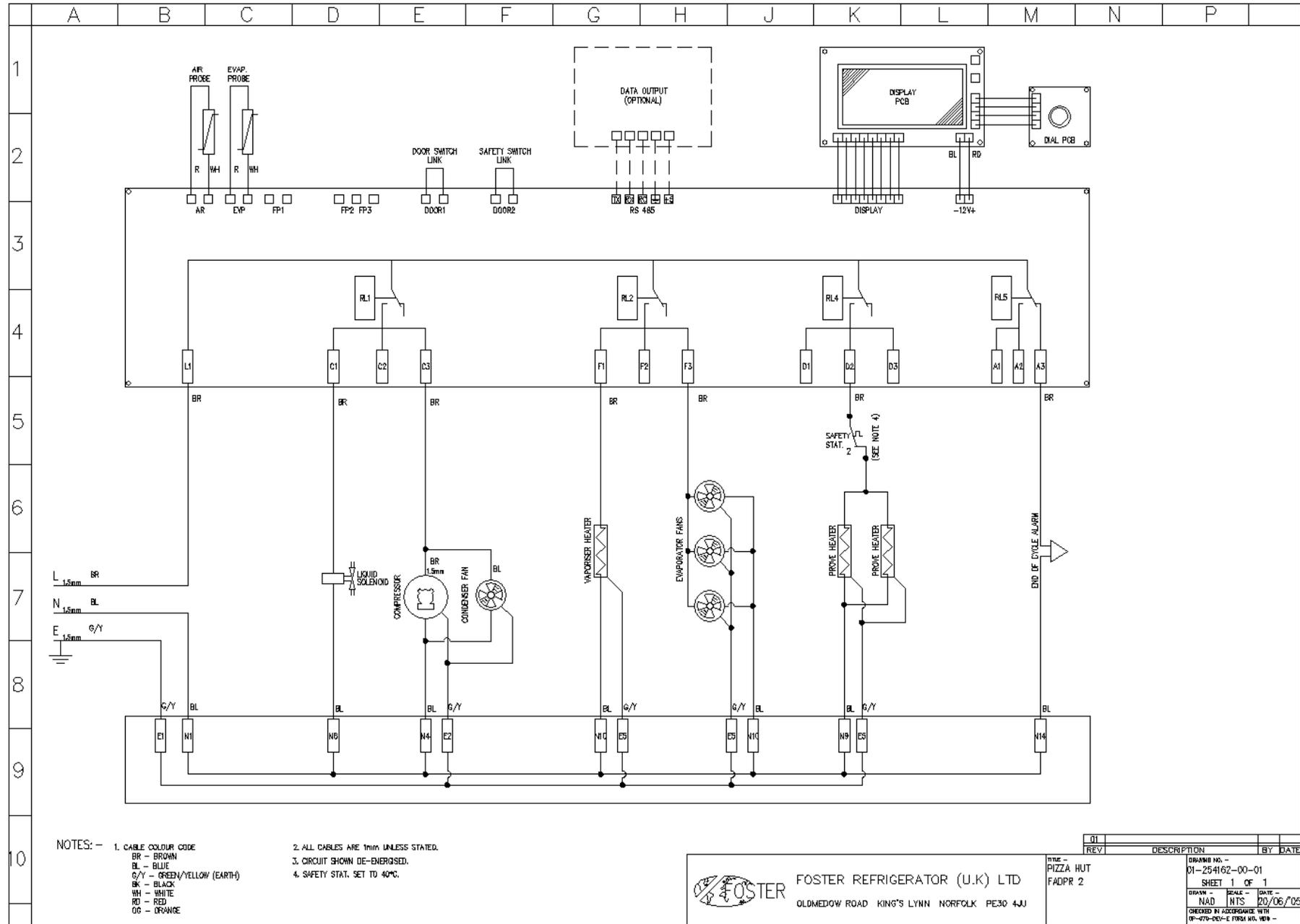
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